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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/618,101

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Joseph R. Byrum

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EXAMINER

ROBINSON, KEITH O NEAL

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/618,101	Applicant(s) BYRUM ET AL.	
	Examiner KEITH O. ROBINSON	Art Unit 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/11/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's cancellation of claims 33-40, filed December 28, 2009, have been received and entered in full.

Claims 1-32 are under examination.

Response to Arguments

Applicant's arguments, see pages 15-17 of 'Remarks filed December 28, 2009, with respect to the 102/103 rejection on pages 8-10 of the Office Action mailed September 25, 2009 have been fully considered and are persuasive. The rejection has been withdrawn.

Information Disclosure Statement

The listing of references on pages 63-67 of the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Objections

Claims 3-5, 9, 17, 18, 21, 22, 24, 28 and 29 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer

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to other claims in the alternative only and cannot depend from any other multiple dependent claim. See MPEP § 608.01(n).

Claim Rejections - 35 USC § 112, fourth paragraph

The following is a quotation of the fourth paragraph of 35 U.S.C. § 112:

Subject to the following paragraph, a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

Claims 10-14 are rejected under 35 U.S.C. § 112, fourth paragraph, as failing to further limit the subject matter of a previous claim upon which it depends.

The claims fail to further limit the soybean plant of claim 1 because they are broader in scope than the claim upon which they depend. The claims encompass a soybean plant that has all the limitations of the soybean plant of claim 1 plus additional genetic material that the soybean plant of claim 1 does not possess. Furthermore, a single locus conversion replaces a gene in the original plant with a different gene. Thus, the plant does not have all the limitations of the plant of claim 1, including the oil and protein content of the plant of claim 1.

Claim Rejections - 35 USC § 112, first paragraph – Written Description

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims read on an agronomically elite soybean plant of a variety having a mean whole seed total protein content of between 45% and 50%, a mean whole seed total oil content of at least 20% and a commercially significant yield, wherein the soybean plant is a progeny plant of soybean SN30003, or a subsequent generation thereof and methods of using said plant.

The specification discloses six soybean varieties in the examples (0007583, 0008079, 0137335, 0137472, 0137441 and 0137810, see pages 43-62); however, only two of these varieties (0007583, pages 43-48 and 0137441, pages 57-59) are progeny of SN30003 wherein said lines possess mean total protein content of between 45% and 50%, a mean total oil content of at least 20% and a commercially significant yield.

Soybean variety 0008079 does not possess a mean total oil content of at least 20% (see, for example, page 51, Table 9 where it discloses that said variety has a mean total oil content of 18.9%).

Soybean variety 0137335 does not possess a total protein content of between 45% and 50% (see, for example, page 54, Table 15 where it discloses that said variety has a mean total protein content of 43.9%).

Soybean variety 0137472 does not possess a total protein content of between 45% and 50% (see, for example, page 56, Table 20 where it discloses that said variety has a mean total protein content of 44.9%).

Soybean variety 0137810 is not a progeny of soybean variety SN30003 (see, for example, page 59, lines 32-34 where it discloses that said variety was derived from a cross of soybean varieties SN30017 and AG3003).

Thus, the specification only provides a description of and Applicant has only shown possession of soybean varieties 0007583 and 0137441 wherein said varieties were derived from crossing SN30003 and A2553 and SN30003 and AG3302, respectively.

Applicant has possession of a narrow genetic base and is broadly claiming the phenotype. Applicant is in possession of a narrow invention limited to a particular soybean variety; however, they are broadly claiming every soybean plant that has the phenotype of their plant even though no analyses as to which genes are involved or how the traits are expressed is given. This is paramount to selecting a seed line for high yield and then claiming every seed line that has high yield, regardless of how they are made. It would be like selecting a seed line for its color and then claiming every seed that happens to have that characteristic regardless of how it was derived.

In addition, the specification describes no structural features that confer the claimed phenotypic characteristics. The claimed characteristics are functional; they are the function of the genetic characteristics of the plant and the environment in which the plant was grown. The structural feature of a plant is its genome. Thus, without a

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description of the structural features that confer the claimed phenotypic characteristics, one of skill in the art would be unable to determine if a given soybean plant, in a given year, will produce a soybean plant with the claimed characteristics. A soybean plant of a given genotype would be encompassed by the claims when grown under some environmental conditions but not under others.

Furthermore, the claims encompass progeny of any generation of SN30003 and thus includes 4th, 12th, 20th and even 100th generation plants. The specification does not describe the structural features that distinguish SN30003 subsequent generation progeny from other soybean plants.

One of skill in the art would not recognize that Applicant was in possession of the necessary common attributes or features of the claimed genus in view of the disclosed species. Since the disclosure fails to describe the structural features that confer the phenotypic characteristics of the genus, the two lines alone are insufficient to describe the claimed genus. Hence, Applicant has not, in fact, described the claimed soybean plant and the specification fails to provide an adequate written description of the claimed invention.

Therefore, given the lack of written description in the specification with regard to the structural and functional characteristics of the claimed compositions, it is not clear that Applicant was in possession of the claimed genus at the time this application was filed.

See *University of Rochester v. G.D. Searle & Co., Inc.*, 68 USPQ2d 1424,1433 (DC WNY 2003), which teaches that method claims are properly subjected to a written

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description rejection if the starting material required by that method is itself inadequately described.

Claim Rejections - 35 USC § 112, first paragraph - Enablement

Claims 1-32 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for soybean lines 0007583 and 0137441 having the claimed characteristics, does not reasonably provide enablement for all soybean plants having the claimed characteristics. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The specification discloses six soybean varieties in the examples (0007583, 0008079, 0137335, 0137472, 0137441 and 0137810, see pages 43-62); however, only two of these varieties (0007583, pages 43-48 and 0137441, pages 57-59) are progeny of SN30003 wherein said lines possess mean total protein content of between 45% and 50%, a mean total oil content of at least 20% and a commercially significant yield.

Soybean variety 0008079 does not possess a mean total oil content of at least 20% (see, for example, page 51, Table 9 where it discloses that said variety has a mean total oil content of 18.9%).

Soybean variety 0137335 does not possess a total protein content of between 45% and 50% (see, for example, page 54, Table 15 where it discloses that said variety has a mean total protein content of 43.9%).

Soybean variety 0137472 does not possess a total protein content of between 45% and 50% (see, for example, page 56, Table 20 where it discloses that said variety has a mean total protein content of 44.9%).

Soybean variety 0137810 is not a progeny of soybean variety SN30003 (see, for example, page 59, lines 32-34 where it discloses that said variety was derived from a cross of soybean varieties SN30017 and AG3003).

Thus, the specification only provides guidance for how to make and use soybean varieties 0007583 and 0137441 wherein said varieties were derived from crossing SN30003 and A2553 and SN30003 and AG3302, respectively.

It would require undue trial and error experimentation for one skilled in the art to determine which, if any, other soybean varieties can be crossed with soybean variety SN30003 to produce soybean plants having a mean whole seed total protein content of between 45% and 50%, a mean whole seed total oil content of at least 20% and a commercially significant yield, wherein the soybean plant is a progeny plant of soybean SN30003, or a subsequent generation thereof.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Wilcox (Crop Sci. 38: 900, 1998).

The claims read on the soybean plant of claim 1 further comprising a single locus conversion. A plant with a single locus conversion reads on a plant with 2000 single locus conversions because "a" is not limited to just one locus conversion. Thus, the claim reads on any soybean plant, including those that do not have the oil and protein contents of the plant of claim 1.

Wilcox teaches an agronomically elite soybean plant, namely C1944, having a mean whole seed total protein content of between 45% and 50%, a mean whole seed total protein plus oil content of between 64% and 70%, and a commercially significant yield (see page 900).

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-15, 29 and 32 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Burton et al (Crop Science 39: 294-295, 1999).

The claims are drawn to an agronomically elite soybean plant of a variety having a mean whole seed total protein content of between 45% and 50%, a mean whole seed total oil content of at least 20% and a commercially significant yield, wherein the soybean plant is a progeny plant of soybean SN30003, or a subsequent generation thereof and methods of using said plant.

The claims encompass progeny of any generation of SN30003 and thus includes 4th, 12th, 20th and even 100th generation plants. Thus, the plants of the claimed invention cannot be distinguished from other soybean plants and read on any soybean plant, including soybean plants that are not progeny of soybean variety SN30003.

Burton et al teach a soybean plant having a mean whole seed total protein content of between 45% and 50%, a mean whole seed total oil content of at least 20%

and a commercially significant yield (see pages 294-295, 'Registration of Prolina soybean). Thus the plant taught by Burton et al appears to meet all the other characteristics of the claimed soybean plant in view of the claim interpretation.

The Office does not have the facilities and resources to provide the factual evidence needed in order to establish that the product of the prior art does not possess the same, material, structural and functional characteristics of the claimed product. In the absence of evidence to the contrary, the burden is on the Applicant to provide that the claimed product is different from those taught by the prior art and to establish patentable differences. See *in re Best* 562F.2d 1252 USPQ 430 (CCPA 1977) and *Ex parte Gray* 10 USPQ 2d 1922 (PTO Bd. Pat. App. & Int. 1989).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.

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1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-9 and 16-18 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 of U.S. Patent No. 7,053,272. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant specification teaches that soybean variety 0007583 is an agronomically elite soybean plant of a variety having a mean whole seed total protein content of between 45% and 50%, a mean whole seed total oil content of at least 20% and a commercially significant yield, wherein the soybean plant is a progeny plant of soybean SN30003 (see, for example, pages 43-48) and claims 1-12 of '272 are drawn to soybean variety 0007583 and methods of use.

Conclusion

No claims are allowed.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEITH O. ROBINSON whose telephone number is (571)272-2918. The examiner can normally be reached Monday – Friday, 8:00 a.m. - 4:30 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached at (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Keith O. Robinson

/Anne R Kubelik/
Primary Examiner, Art Unit 1638